

3rd Edition

COLONY OF THE GAMBIA.



THE ANNUAL MEDICAL AND SANITARY REPORT FOR THE YEAR 1923.

Alkan (K.B.)

= Acting Sanitary Officer

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Medical & Sanitary Report of the
Gambia for the year 1923

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WESTMINSTER,
LONDON, S.W. 1.

July 1924 4

COLONY OF THE GAMBIA.



THE ANNUAL

MEDICAL AND SANITARY REPORT

FOR THE YEAR 1923.

MEDICAL REPORT.

April 7th, 1924.

SIR,

I have the honour to submit for the information of His Excellency the Governor, and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary condition of Bathurst, Gambia, for the year 1923, together with the Returns, &c., appended thereto.

I have the honour to be,

Sir,

Your obedient servant,

K. B. ALLAN,

Acting Senior Medical Officer.

THE HONOURABLE

THE COLONIAL SECRETARY.

ANNUAL MEDICAL AND SANITARY REPORT
FOR
1923.

I. ADMINISTRATIVE.

(a) STAFF.

I. MEDICAL.

Dr. T. F. G. Mayer, Senior Medical Officer in charge of Medical Department from 1st January to 13th April. Proceeded on leave 14th April and retired on pension on 13th October.

Dr. K. B. Allan, Medical Officer, transferred from the Gold Coast Colony 24th March, arrived in the Colony and assumed duty 6th April, appointed Acting Senior Medical Officer 13th April.

Dr. R. H. Miller, Medical Officer, resumed duty from leave on 3rd May. He was stationed at Georgetown from 15th May until 29th July.

Dr. G. E. Craig, Medical Officer, left the Colony on leave 30th September.

Dr. J. C. Cruickshank, Medical Officer, appointed 7th April, arrived in the Colony and assumed duty 19th April. Transferred to Georgetown, MacCarthy Island, on 23rd October.

The appointment of Senior Medical Officer has not yet been filled.

II. NURSING.

Miss M. Thompson, Senior Nursing Sister, proceeded on leave of absence 27th November.

Miss C. G. Leggat, Nursing Sister, acted as Senior Nursing Sister from 24th November.

Miss P. Stagg, Nursing Sister, was absent from the Colony on leave from 11th August until 30th November.

III. SANITARY.

Dr. F. A. Innes, Medical Officer of Health.

Mr. C. Wolfendale, Sanitary Inspector, was absent from the Colony on leave from 29th June until 15th November, when he resumed duty. He was confirmed in his appointment, which dates from 1st August, 1916.

Mr. A. F. V. Vaughan, Assistant Sanitary Inspector, left the Colony on leave on 30th December.

(b) FINANCIAL.

MEDICAL DEPARTMENT.

						Estimated.	Actual.
						£	£ s. d.
Total Revenue ...	...	...	...	...	...	350	369 16 8
Total Expenditure ...	...	...	...	...	...	14,326	12,135 11 1

PUBLIC HEALTH DEPARTMENT.

						Estimated.	Actual.
						£	£ s. d.
Total Revenue ...	...	...	...	...	...	1,100	1,250 6 11
Total Expenditure ...	...	...	...	...	...	8,444	8,255 3 5

II. PUBLIC HEALTH.

(a) GENERAL REMARKS.

(1) *General Diseases.*

Bronchitis, Pneumonia, Constipation and Diarrhœa occur most frequently as Medical Diseases ; while Ulcers, Abscesses and Injuries account for the majority of the surgical complaints. Very few cases of Venereal Disease recorded.

(2) *Communicable Diseases.*

1. *Insect-borne*.—(1) Malaria, 1,331 cases treated, 3 deaths ; (2) Blackwater Fever, 6 cases and 4 deaths ; (3) Yellow Fever, no cases occurred.

2. *Epidemic Diseases*.—(1) Influenza, 1,049 cases, 2 deaths ; an outbreak during October and November ; (2) Plague, no cases ; (3) Small-pox, 36 cases, 4 deaths.

3. *Helminthic Diseases*.—Tæniasis, 101 cases : (2) Ascariasis, 255 cases ; (3) Oxyuriasis, 14 cases.

(b) EUROPEAN OFFICIALS.

Health good. Malaria still remains the most prevalent complaint. Most of the illnesses occur between July and November. There were several cases of Influenza ; one death due to Blackwater Fever.

The Officers and B.N.C.O's of the Gambia Company of the W.A.F.F. stationed at Cape St. Mary appear to have more sickness than any of the other departments.

TABLE SHOWING THE SICK, INVALIDING, AND DEATH RATES OF EUROPEAN OFFICIALS.

	1921.	1922.	1923.
Total number of officials resident	75	63	65
Average number resident	38	48	45
Total number on sick list	50	68	51
Total number of days on sick list	281	387	319
Average daily number on sick list	0·77	1·22	0·87
Percentage of sick to average number resident ...	131·5	141·66	113·33
Average number of days on sick list for each patient	5·0	5·47	6·25
Average sick time to each resident	7·0	8·06	7·08
Total number invalided	3	2	2
Percentage of invalidings to total residents	4	3·17	3·07
Total deaths	—	—	1
Percentage of deaths to total residents	—	—	1·53
Percentage of deaths to average number resident ...	—	—	2·22
Number of cases of sickness contracted away from residence	—	—	—

The cause of the one death was—Blackwater Fever ; the causes of the two invalidings were—Pyorrhœa and Arthritis.

(c) NATIVE OFFICIALS.

The health of the African Officials.—Malaria, Bronchitis, Influenza and Diarrhœa are the most prevalent diseases. October to January appears to be the most unhealthy period, according to the sick list entries. The sick rate has increased compared with the last two years. Only one death, due to Cerebral Hæmorrhage.

TABLE SHOWING THE SICK, INVALIDING, AND DEATH RATES OF AFRICAN OFFICIALS.

	1921.	1922.	1923.
Total number of officials resident	177	192	203
Average number resident	155	177	181
Total number on sick list	182	270	533
Total number of days on sick list	854	1,096	2,070
Average daily number on sick list	2·41	3·1	5·67
Percentage of sick to average number resident ...	85·16	152·54	294·47
Average number of days on sick list for each patient	4·85	4·16	3·88
Average sick time to each resident	5·5	6·19	11·43
Total number invalided	—	2	2
Percentage of invalidings to total residents ...	—	1·04	·98
Total deaths	1	5	1
Percentage of deaths to total residents	—	2·60	·49
Percentage of deaths to average number resident ...	·64	2·82	·55
Number of cases of sickness contracted away from residence	—	—	—

The causes of invalidings and death—(1) Defective Vision ; (2) General Debility.

The cause of death—Cerebral Hæmorrhage.

(d) GENERAL EUROPEAN POPULATION.

This is as follows :—

	Males.	Females.
Government Officials	62	3
Residents... ..	1	21
Employees of Trading Firms	110	—
Missionaries	5	8
Total	178	32

Grand total, 210.

Of the 145 non-officials, one was invalided and three died ; an invaliding rate of 6·2 per 1,000 and a death rate of 20·6 per 1,000.

The deaths were due to Blackwater Fever, 2 ; Anæmia, 1 ; and the invaliding to Acute Appendicitis.

(e) GENERAL AFRICAN POPULATION.

In a population of 9,567 there were 235 births, a birth rate of 26·65 per 1,000 ; and 412 deaths, a death rate of 43·06 per 1,000.

There were 52 still-births and 127 deaths of infants up to one year of age.

Percentage of infants in total deaths, 30·8 ; the average of previous five years being 26·72.

TABLE SHOWING THE SICK, INVALIDING AND DEATH RATES OF EUROPEAN NON-OFFICIALS.

How employed.	Number.	Deaths.	Invalided.	Death rate per cent.	Invaliding rate per cent.
1922.					
Merchants	115	1	1	·87	·87
Other occupations	28	Nil	Nil	Nil	Nil
Missionaries	12	Nil	Nil	Nil	Nil
Total	155	1	1	·64	·64
1923.					
Merchants	115	3	1	2·60	·87
Other occupations	17	—	—	—	—
Missionaries	13	—	—	—	—
Total	145	3	1	2·06	·62

Causes of Deaths of Europeans, Non-Official.—Anæmia, 1; Blackwater Fever, 2.

(One case of Blackwater Fever landed from Sierra Leone not included in above.)

Cause of Invaliding of European Non-Official.—Acute Appendicitis.

NUMBER OF DEATHS AND DEATH-RATE PER THOUSAND OF THE
POPULATION FOR THE PAST TEN YEARS IN THE COLONY.

(*Vide* CENSUS, 1921, ETC.).

Years.	Estimated Population.	Total Deaths.	Death-rate per 1,000.	Remarks.
1914	13,157	342	25·99	
1915	13,157	296	22·49	
1916	7,700	272	35·32	Bathurst only.
1917	8,474	262	30·09	Do.
1918	8,474	662	77·08	Do. (Influenza Epi-
1919	8,474	299	35·28	Bathurst only. [demic.)
1920	8,474	414	45·43	Do.
1921	*9,227 (census)	394	42·59	Do.
1922	9,395	437	46·62	Do.
1923	9,567	412	43·06	Do.

* Total Europeans, 265. Africans, etc., 8,962 = 9,227.

Two cases of death landed. One drowned in Bathurst Harbour.

INFANTILE MORTALITY FOR THE PAST TEN YEARS IN THE COLONY.

Years.	Total Births.	Deaths over 1 year and under 5 years.	Deaths over 1 week and under 1 year.	Deaths over 1 day and under 1 week.	Deaths under 24 hours.	Still Births.	Remarks.
1914	304	27	59	16	5	27	
1915	279	40	58	18	1	30	
1916	314	46	61	10	3	22	Bathurst only.
1917	337	22	59	9	—	30	Do.
1918	263	89	121	17	—	30	Do.
1919	234	30	63	18	4	39	Do.
1920	249	59	82	13	5	41	Do.
1921	284	60	40	25	6	52	Do.
1922	295	56	102	12	9	50	Do.
1923	255	35	92	21	4	52	Do.

The birth rate 1923, 26·65 per 1,000.

COMPARATIVE STATEMENT OF BIRTHS AND DEATHS FOR THE PAST TEN
YEARS IN THE COLONY.

Years.	Births.	Deaths.	Births in Excess.	Deaths in Excess.	Remarks.
1914	306	342	—	36	
1915	279	296	—	17	
1916	314	306	8	—	Bathurst only.
1917	337	262	—	25	Do.
1918	263	662	—	399	Influenza Epidemic.
1919	234	299	—	65	Bathurst only.
1920	249	413	—	64	Do.
1921	284	399	—	115	Do.
1922	295	437	—	142	Do.
1923	255	412	—	157	Do.

Death rate 1923, 43·06 per 1,000.

Registration compulsory and reliable.

III. SANITATION.

A.

(1) ADMINISTRATIVE.

Plague.—During 1923 no case of Plague was reported anywhere in the Gambia. Indeed, no suspicion of its presence seems to have arisen. This happy experience is rather apt to diminish that sense of real danger which was initially excited by the Plague outbreak during 1922 in North Bank Province. Matters are made serious for us by the fact that notification of its presence at ports and in territory near us usually comes too late to be useful, if it comes at all. The practice of notification of dangerous infectious disease seems to require rescue from desuetude, for it is plain that adequate adherence to international pledge, though essential to the common good, is not being maintained.

Thus, in October rumour reached us that in French Senegal, near its border with North Bank Province, people had been dying in numbers during the rains, and that house burning and abandonment of town site had been parts of the remedy officially applied there. It may or may not be true in whole or part, but careful enquiry on the spot established the fact that the appearance of Bubonic Plague in North Bank Province in 1922 had been preceded by an essentially similar train of events on the Senegal side of the border. *Satis, superque!*

One other cardinal fact cannot be over-emphasised, viz., that the whole of Senegal is Gambia's chronically plague-infected neighbour. Published statistics prove this. As already pointed out in 1922, Senegal has been officially acknowledged to be plague-stricken at some part every month of the year.

Plague prevention.—By way of reasonable precaution, therefore, Plague inspection work was maintained for some months at Barra, the across-river terminus on the main route for Bathurst from the North Bank Province and Senegal, disinfection of suspicious clothing and goods being in some cases effected. The plague-sick rat is our more likely and dangerous vector of the disease than the sick flea or the sick human.

As a further protective measure, rat reduction was prosecuted both in North Bank Province and in Bathurst, in the latter with slight results. Legislation, however, was taken in hand to consolidate and control various anti-rat town measures which depend mainly for success on protection of foodstuffs from these rodents. All rats brought to the Public Health Office have been paid for at one penny each. Trapping and poisoning have been in use, but we seem only at the beginning of benefit from this important prophylactic measure.

Mosquitoes.—Bathurst continues to be far too heavily infested with mosquitoes. Culicines and Anophelines figure in the rainy months, but Stegomyia are a sempiternal pest. The addition of Toxorhynchites brevipalpis and Mucidus (? mucidus) to our local list of Culicidæ is only of scientific but not economic interest. Much, unfortunately too much, has to depend on the efficiency of yard inspection. To state, *e.g.*, that the "Mosquito Index"—the percentage of yards infested—as returned by the African Inspectors for October to December was '14, as against the M.O.H.'s independently ascertained 5·5 per cent. for the same quarter, tells its own tale. The racial element of inconsequence, both in Inspector and inspected, is an all but ineliminable factor in this hard problem. It must be conceded, however, that there is little inducement at present for the native Inspectors to thoroughly qualify themselves for their work. A definite course of graded instruction must be undertaken, with promotion after examination and terms of efficient work, and remuneration must be offered such as will invite competition and

foster reasonable ambition. Only special teaching and good pay will create a really competent class of Inspector.

Prosecutions are common for mosquito offences ; but it is hoped that the raising of maximum penalty from one pound to five pounds will lead negligent townspeople to conclude that careful protection of water vessels by cloth covers, lids, etc., will at least conserve their wealth if not their health.

Rain flooding.—During July rainfall was unusually severe. Instead of the previous decennium's average of 7·6 inches, 27·49 were recorded, followed by 24·10 in August. Kerosene was too expensive and its results too unreliable to admit of wide and repeated oilings. Stocking large sheets of water with larvæ-eating fish was resorted to ; but in the outskirts of the town various grallatores quickly pirated these valuable piscine agents, and many mosquitoes must have hatched out. Drainage would help to obviate a repetition of this experience ; *e.g.*, all that long strip on the sea side of the Cape Road between the Roman Catholic Cemetery to opposite the Infectious Diseases Hospital could be perfectly drained into the Malfa Creek swamp area through small culverts at well selected points. A considerable depression in the cemetery itself has been filled up and a mosquito breeding place thereby converted into a useful piece of burying ground.

Drainage of the long deep depression in the general cemetery has also been planned until it can be filled up, and so a further otherwise almost intractable mosquito breeding area will be obliterated.

In the town itself the excessive floods occasioned unusual sights and effects. Careful estimate shows that about one quarter of the four hundred acres covered by Bathurst is liable to annual flooding ; this year the proportion was greatly extended and the period prolonged. The matter is one purely and simply for Sanitary Engineers, as is the allied subject of storm-water drainage.

There is no doubt that apart from genuine discomfort and hardship in waterlogged yards, the standard of health is lowered by the excessive damp therein, and lives, particularly of children, are lost. The increase of infant mortality from an average of seven for the first six months of the year to twenty-nine in July is a striking feature even in an exceptional year. To explain it the suggestion may be hazarded that neither heat nor rain *per se* proves fatal, but the conditions do in which the moist heat has to be endured. Indeed this environmental factor may be the one that turns the balance fatally at both extremes of life during the months of moist heat.

As indicative of public opinion on such yard conditions generally, it is only right to admit that discussions are frequently forced on the Public Health Department which show that longsuffering patience has reached a stage of perilous impoundage, and that hope deferred threatens to compromise if not discount Administration credit. Should the Dutton Scheme be found effete, it is more than time that a substitute were put in hand, costly though it must be.

Public Latrines.—Reconstruction of the public pail-latrines has been completed. It is hard to see what more could have been done to make them fool-proof and really excellent for their purpose. Wood has been entirely eliminated except in the roof. Men and women enter from different ends. Both halves are divided into single compartments which have each a metal door, and thus complete privacy is secured. The pails are carefully placed between squatting blocks which project suitably from the walls. The cement floors and walls, for three feet up, were treated with Glidden's cement dressing. Water was also laid on so that all parts could be frequently washed down. Yet all this perfection has done nothing to correct the suilline propensities of this public. Disgusting misuse is rampant, while conviction for deliberate offence is rare and difficult to obtain. Perhaps the cat-o'-nine tails would have a salutary inhibiting effect, since fine "with the option" fails to

impress. It may be, however, that further hope of improvement lies in constant scrutiny of users—distasteful though this would be—and the provision of sand for the pails.

Nightsoil disposal.—On the question of nightsoil service, the possibility of a pail system for the whole town with river disposal by barges and steam launch has been further explored and reported on. Consideration of other schemes formerly set aside for perhaps insufficient reason, or transient disabilities, may have to be renewed. It can be stated, however, that every feasible scheme must involve initial collection of the ordure by pail and cart transport to one point. It is the end-problem of disposal that evokes schemes which are rivals in efficiency as well as in threatened cost.

Market problems.—The additional sheds long asked for and much needed in the Market have not been provided. The grievous arrangements conditioning slaughter, examination and storage of meat are unremedied still.

It was suggested last year that the sources of our local meat mart should be investigated as at times demand was exceeding supply. Shortage has been observed again on occasions during 1923, particularly in oxen. The number of all slaughtered animals falls short of the previous year's total by 387 ; and of the 1922 total by 506. The possible explanations cannot be given in this report, and it may be that the difficulty is only temporary.

Bread Ordinance.—Sufficient experience of this new law, gazetted in November, has not been gained to enable any forecast of its benefits to be set down. There was much need for better control, which will be carefully and increasingly applied.

Epidemic Disease—Smallpox.—Smallpox broke out in town in mid-March and was not over till the end of July. In that interval 36 patients were isolated and treated with a case mortality of 11·1 per cent. Temporary overcrowding led to the advising and approval of extended accommodation, which should be of a permanent rather than temporary character, so as to replace ultimately the present fugacious “krinting” and mud.

Analysis of the cases shows that of the total, 20 had been and 14 had never been vaccinated, and 2 had had smallpox at a remote date. Of the fatal cases 1 had been and 2 never vaccinated, and 1 had had smallpox. Among the patients previously vaccinated not a few showed what can only be described as typical foveated cicatrices, and yet the majority of the cases in this outbreak occurred in devaccinated people. Undoubtedly also there were “missed” cases from the same cause—devaccination. At our present stage of general sanitation and housing conditions—and probably for a considerable time to come—amid the greatest reluctance to report cases, and sometimes even careful concealment of them, we seem to have no line of public defence against vexatious annual recurrences except in securing all the advantage that vaccination and revaccination can give us.

Legislation, therefore, to effect this is to be drafted accordingly.

Influenza.—The only other epidemic disease that definitely affected our mortality rate was influenza, from which 12 adult and 6 infant deaths were recorded in October, and 1 adult and 2 infants in November. Probably also some of the 7 deaths from pneumonia in November were influenzal. Its incidence was certainly very heavy, though case mortality was small.

It is not by isolated deaths, but by little groups of deaths that influenza appears in our mortality lists, and every fresh outburst of it in the community is signalled in the same way.

Beriberi.—In January there were no fewer than 22 men admitted to the prison infirmary suffering from beriberi, and even as late as July in one case, June in 6 and May in 2 cases, the entry opposite the names is “relieved.” Three of these cases proved fatal, 1 in January and 2 in February. In February

9 other cases occurred with 2 fatalities, 1 in February and 1 in May. Thereafter not one case was recorded for the rest of the year.

The recommendations previously made about diet were now put into effect. With April began the issue of lemon juice to each man several times a week. In May the issue of imported white rice was finally stopped, and native husked rice was substituted and has been issued since. Moreover, cabbage, lettuce and turnip were being added to the diet, along with the previously most inadequate issue of “saur”—a native vegetable.

If the remarkable freedom from cases since March, 1923, is maintained it may be safely concluded that the diet deficiencies pointed out have been the main factor in keeping up the perennial association of beriberic disease with prison life. It may be said that change of diet merely coincided fortuitously with the decline of the disease. That may be, but chance would not cause its total disappearance! It can be shown also that the disease has had no seasonal incidence in Bathurst.

There still remains the question of “locality.” A partial answer to this lies in the fact that cases were occurring in No. II. Prison before the change of diet took effect! It was pointed out in last year’s report that the whole environment of each man at No. I. was such as increased his susceptibility to *any* disease, both beriberi and diet apart. The year’s experience of the change from No. I. to No. II. goes to show that the new conditions have been decidedly beneficial in the direction of lessening all common sickness, although, as already stated, it was not preventing the occurrence of beriberi. To sum up, therefore, our local experience of beriberi, while not evidentially excluding the possibility of locality, environment, or even infection being causally contributory, lends most decided weight to the nutritional and deficiency theory of causation of this affection. A table is submitted of the occurrence of cases in both prisons for 1921 to 1923, showing a total of 159 cases and a death rate of 5·03 per cent.

				1921.		1922.		1923.		Total Cases.	Total Deaths.
				Prison		Prison		Prison		Three years both Prisons.	
				I.	II.	I.	II.	I.	II.		
January	...	...	...	3	1	7	1	17	5	34	1
February	...	...	...	2	0	6	1	8	1	18	3
March	...	...	...	4	0	4	0	2	0	10	—
April	...	...	...	5	0	6	0	*1	*0	12	—
May	...	...	...	1	2	7	2	†0	†0	12	1
June...	...	...	...	3	0	3	0	0	0	6	—
July ...	...	...	...	2	0	5	3	0	0	10	—
August	...	...	...	4	1	4	2	0	0	11	2
September	...	...	...	2	0	1	0	0	0	3	—
October	...	...	...	5	0	8	0	0	0	13	1
November	...	...	...	1	0	14	3	0	0	18	—
December	...	...	...	3	4	5	0	0	0	12	—
Totals	...	...	...	35	8	70	12	28	6	159	8

Incidence of *Beriberi* in Prisons No. I. and No. II., Bathurst.
*Marks beginning of issue of lemon juice, 1923.
†Marks beginning of issue of “husked” rice, 1923.

Prisoners numbered in 1921, 279.
 ,, ,, ,, 1922, 348.
 ,, ,, ,, 1923, 290—disease rate ∴ = 17·33 per cent.

Dysentery, etc.—Grouping together the headings diarrhœa, enteritis and dysentery of our returns, there is revealed a marked prevalence of these strictly in the quarter July to September, in the proportion of 4 to 1 as con-

trusted with all the other months. Moreover, their incidence falls exclusively on infants and age group 1-5 years. Again, in the same groups and in exactly the same quarter, malaria shows a proportion of 5 deaths as against 2 for all the other months.

General Measures.—Attention has been specially called to the fact that the nomenclature in our return lists has not been in conformity with the International List of Causes of Death. The medical profession is fortunately and ably sustained by its practitioners here, and it is a thousand pities that the tabulation of their clinical, diagnostic and other work should be anywise minimised in value for scientific workers in general through occasional mere ambiguity or indefiniteness in the nosological terms used. The local practitioners have been therefore requested to follow the recognised systems of nomenclature, and further complaint in this matter is unlikely to arise.

Vital Statistics and Child Welfare.—The year's returns do not entitle us to any marks for progress. The general death rate is 43·06; this gives an average for the quinquennium of 42·75 per mille.

The birth rate is 26·65, being the lowest on record since 1900, when 23·5 was given as the figure. For the quinquennium it is 28·99. Deaths have outnumbered births by 157. This figure has been exceeded twice since 1901, viz., in 1920, when the excess deaths were 170, and in 1918—the “flu” year—when they reached 289. Figures were given last year to show that only thrice in the last twenty-two years have births been more numerous than deaths, viz., 1909 by 10, 1916 by 10 and 1917 by 73. It may not be pleasing, but it is plausible, to liken the life of Bathurst to that of a cancer which, unable to maintain the vitality of its own cells, involves neighbouring ones in the common disaster. Bathurst cannot maintain its own life and it only continues its career by imported lives.

Infant Mortality.—The infant mortality rate is practically undiminished. The 1923 figure is 498, as against 502 last year; so it is still true that every second child dies within a year of birth. These rates must be considered, of course, in the light of the great drop in the 1923 birth rate, which makes the 498 theoretically worse.

The percentage of infant deaths in total deaths is 30·8, against 28 last year.

A table is given to show the dying rates (averages for five years) of various age groups, from which it is evident how hardly the initial quinquennium is hit. The rates are based on the census returns of 1921, which is the mid-year of the quinquennium. Among other things, it illustrates the principle that “a high infant mortality rate implies . . . a high death rate in the next four years of child life.” The age groups given are the only ones “censused” and so made available for such statistical purposes.

In considering the concatenation of influences adverse to infant life in Bathurst, it is far from easy to interpret without hesitation the relative importance of the lethal factors. A graph is appended* to show the actual deaths per month of adults and infants for 1923 alongside of the quinquennial averages. Several points may be remarked on. (1) The months January to June are healthiest for both adult and infant. (2) The effect of the rainy season (its duration June to October underlined—also the proportional rise of temperature indicated by slope of line) is first seen and at once seen on the infant group by a marked rise in death rate, while the adult death rate remains quite steady till August. The average maxima of both adults and infants are attained in October by almost *pari passu* increase from August. (3) It may be inferred from the average lines that the more sensitive and less resistant infant group succumbs quickly to malign environment, while the resistance of adults is gradually worn down by relapses and increasing cachexia till maximum fatality is reached in October. More than this it is

* Not printed.

not safe to deduce, as both argument and deduction are relatively unstable owing to the small numbers we have to work with.

Age Group.						Proportion of Male to Female.		Dying rate per mille of each group (averages of five years).
-1 year	...	...	...	...	...	3	2	—
1-5 years	...	...	...	...	...	3	4	197.1 ?
5-10	„	...	...	...	...	1	1	8.4
10-15	„	...	...	...	...	5	2	7.6
15-20	„	...	...	...	...	1	1	8.7
20-25	„	...	...	...	...	9	5	13.8
25-30	„	...	...	...	...	20	7	21.9
30-35	„	...	...	...	...	13	4	22.4
35-40	„	...	...	...	...	3	1	29.6
40-45	„	...	...	...	...	3	1	23.6
45-50	„	...	...	...	...	14	5	39.5
50-55	„	...	...	...	...	5	2	21.5
55-60	„	...	...	...	...	3	2	62.0
60 +	„	...	...	...	...	3	4 ?	80 ?

Mortality rates of age groups, Bathurst (*i.e.*, deaths per mille of those living in each age group), based on Census for 1921.

Still-births.—The number of still-births per 100 registered live births is 20.39 ; *i.e.*, 1 still-birth to every 4.9 live births. The equivalent still-birth rates since 1909 are as under :—

1919.	1920.	1921.	1922.	1923.
% 15.31	% 16.46	% 18.31	% 16.27	% 20.39

A recent work (“The Welfare of the Expectant Mother”—Scharlieb), commenting on British figures, says, “Still-births are very numerous: they comprise some 30 in the 1,000 of total births.” In Bathurst for 1923 they were 204 per 1,000 ! Some undoubtedly escape all notification. Comment is unnecessary !

Illegitimacy.—There are proofs that the illegitimate birth rate in Bathurst is amazingly high, and as is well known, the fact of illegitimacy bears seriously on infant welfare. It is not possible however to give exact figures or rates in this matter. Beyond doubt the baneful influence works lethally both before as well as after birth. Indeed there is a strong nexus between the illegitimacy rate and the still-birth rate, and I dare suggest even some with the tetanus rate.

All three rates are very high. They illustrate poignantly the direct effect of public morals on public health. They further indicate that the massive problem behind child welfare is that of the illegitimate parent,—even grandparent !

Tetanus.—The very great preponderance of infection here appears as tetanus neonatorum.

Of infants dying within six months, 31.3 per cent. died of tetanus. Of total infant deaths (*i.e.*, up to one year), 12.8 per cent. were due to tetanus.

Has tetanus a seasonal incidence ? A graph* has been constructed to show how its occurrence plots out with temperature and rainfall. There is strong temptation to deduce from it that the tetanus death rate (incidence of this disease and its death rate are in infant age-group practically synonymous) creeps up with the temperature, remains high during the high temperature, and declines when the temperature falls. The effect of rainfall seems very much less, if maximum humidity is not indeed almost biologically adverse. (Note the drop of tetanus rate from the point of maximum rainfall in August

* Not printed.

to September, though the temperature is still rising.) When the rainfall has declined to one-third of its maximum in October the tetanus death rate is still practically at its maximum, and keeps so for another whole month, finally dropping in December with the sharp fall in temperature. It is more striking still that the temperature, rising in March, begins to pull the tetanus death rate up with it, though no rain falls till almost three months later. This relation of tetanus to temperature might emerge even more temptingly if its incidence were not liable to great occasional upset owing to groups of infant deaths being caused by one or other midwife spreading the mischief among her clients, apart from either temperature or humidity.

Unfortunately no progress has been made with the suggested mother and infant welfare work. There is not only the question of expense but also the difficulty of procuring, and then training, suitable workers. The figures for 1923 again show how clamant is the need for active and determined measures.

B.

Lectures and School Instruction.—A course of public lectures on Hygiene in simple English is given annually by a Medical Officer. School children, teachers, and Public Health Inspectors are specially invited to attend. The last class roll numbered 69. In the examination at the close only 13 out of 45 gained the pass mark. Of course Hygiene is also a subject in the schools' curriculum; and in the December examination 16 pupils were presented of whom 8 passed the examination.

Now it is wise and right to prescribe and conduct such lectures and lessons, and to expect results from them. Meantime the elder people consider it all a "stunt" for school boys, they themselves being stimulated to antagonistic interest in hygiene only when the Inspector "humbugs" them by professing to find "laavee" in their wells and coolers—with the grossly unwelcome, and to them unfair, sequel of Court proceedings and a fine of 2s. 6d. upwards! It may be asked, how long this is to last, and whether remedy can be provided. We go on fining people for breaking the law, but we cannot claim that we offer much instruction to help them to keep it. Would it be impossible for Government to provide an educational lantern (electric light), with a suitable selection of scientific slides in tropical medicine and hygiene, a lecturer, and an interpreter, for a succession of public demonstration-lessons so as to interest the people outside the boy and girl of school age? Such an effort to interest and educate the public in their own affairs of life and death would surely help to make civic and social wheels move more worthily and healthily, in contrast with our poor results from time and money expended in compelling and castigating this large community recalcitrant because ignorant!

FRANK A. INNES,
M.O.H.

ANNUAL SANITARY REPORT FOR THE PROTECTORATE AND GEORGETOWN, 1923.

1. *The Staff* consists of—

- (i.) The dispenser, acting as Inspector of Nuisances and Meteorological Observer.
- (ii.) The Market caretaker.
- (iii.) The lamplighter.
- (iv.) The Georgetown gang of five labourers and one headman.
- (v.) The Kuntaur gang of six labourers and one headman.

2. *General.*—Georgetown is now a clean town, but other towns on the river have reached greater sanitary importance, especially Kuntaur, the chief problem being that of disposal of refuse when the population is suddenly greatly increased by the arrival of the groundnut steamers: and, in conjunction with this, the problem of a good water supply.

The routine Public Health work done consists of

(i.) ANTIMOSQUITO MEASURES.

Georgetown is regularly inspected and breeding places prevented and treated. Mosquito-proofing is present in the hospital only, though certain of the European dwellings are partially proofed.

(ii.) SMALLPOX MEASURES.

Vaccination is constantly being carried out in Georgetown and the Protectorate by the Medical Officers and Public Vaccinators—the people come readily, and, during epidemics, are now found to be alive to the necessity of isolation of cases. The difficulty chiefly met with is that the vaccine becomes inert so rapidly.

(iii.) REFUSE DISPOSAL.

In Georgetown refuse is disposed of by burning in three mud incinerators: the people deposit the refuse at the incinerators along with the weeds, grass and vegetable refuse cleared from the public places by the sanitary gang. The burnt and incombustible material is buried in pits.

(iv.) SEWAGE DISPOSAL.

In Georgetown, the general population use cesspits in their yards: since wells are not used, this is satisfactory. The European population use latrines, of which ten are in official quarters, on the earth and pail system: prison labour is used for disposal of the sewage by burial outside the town. There is a latrine on the pail system near the prison, used by the native population.

In other riverine towns, the disposal is more difficult. Kuntaur, surrounded by swamp and with all available hard ground occupied, is liable to extreme fouling, particularly by the large numbers of labourers brought up to load groundnut steamers—they use the nearest patches of bush, of which there are a few within the limits of the town beside the creek which divides it. At present there are two public latrines, the pails from which are emptied by the sanitary gang in a mud incinerator outside the town. If the system is to be retained, it should be extended and constantly supervised; concessions and bush spaces should be fenced to prevent fouling of the town and of the river from whence comes the water supply.

(v.) WATER SUPPLY.

The water used by Europeans in Georgetown and other wharf towns for drinking and cooking purposes is rainwater stored in tanks. The natives use river water, which in places where much refuse is being discharged from towns or steamers, must be dangerous, though this danger is lessened by the natural purification of the river by subsidence, dilution and the tide.

In the up towns of the Protectorate wells are used—these are usually lined with impermeable material and the mouth banked up with mud to prevent water draining back into the well.

There are four wells in Georgetown—one near the hospital now unused, two used for gardening purposes only and one for drinking purposes. Larvæ have not been found in these, probably because they are stocked with small fish.

(vi.) MARKETS.

The larger towns have markets, some of which are provided with meat safes. Tapeworm disease is common—meat is inspected by the Inspector of Nuisances at Georgetown.

In the later part of the year, a new market was erected at Kuntaur.

3. Meteorological report for 1923 (attached).

4. Sanitary Report of Prison (attached).

METEOROLOGICAL REPORT FOR GEORGETOWN, 1923.

Month.	Maximum.	Minimum.	Range.	Mean.	Rainfall.	Wind.
	° F.	° F.	° F	° F.	Inches.	
January	96	56	40	76	—	North East.
February	102	54	48	78	—	Variable.
March	108	63	45	85·5	—	"
April	110	61	49	85·5	·26	North.
May	110	73	37	92·5	—	Variable.
June	107	73	34	89·5	3·48	"
July	100	70	30	85	4·43	"
August	94	71	23	82·5	9·08	North.
September... ..	97	70	27	83·5	14·85	North East.
October	99	71	28	85	2·37	North.
November	98	65	33	81·5	1·75	Variable.
December	97	60	37	78·5	·11	North.
Average	101·5	65·6	36	83·6		

Highest temperature of the year	...	...	110° F.
Lowest " " " "	...	...	54° F.
Rainfall for year	...	...	36.33 inches.
Prevailing Wind	...	...	North East.

ANNUAL SANITARY REPORT, GEORGETOWN PRISON, 1923.

The sanitary conditions prevailing in the Gaol during the year have been very satisfactory.

Latrines.—There is one latrine on the pail system (four pails), the excreta being buried in the bush each day.

Diet.—The prison diet consists of rice, pap and meat ; it has been good in quality, and the quantity per head is satisfactory.

Water.—The water supply is obtained from the river.

ACCOMMODATION.

No. of cells = 8 (including prison infirmary).

Dimension of cell = 20 by 12 by 15 ft.

$\therefore$ Cubic capacity = 3,600 cub. ft.

Number of "beds" in cell = 5.

„ „ prisoners varies from 5 to 8 in each cell.

$$\therefore \text{Space per head} = 720 - 450 \text{ cub. ft.}$$

VACCINATIONS.

Total Number Performed.	Successful.	Not seen.	Failed.
11,375	3,249	223	7,903

IV. METEOROLOGY.

See Table for Bathurst and Georgetown.

V. HOSPITALS AND DISPENSARIES.

(a) VICTORIA HOSPITAL, BATHURST.

1. The Duty Room was re-roofed with corrugated iron owing to leakage.
2. An additional ward for maternity cases added to the Female block.
3. Official ward repainted and doorway made between it and No. 1 ward.
4. Several minor repairs to the other wards.

(b) GEORGETOWN MACCARTHY ISLAND.

Minor repairs to Hospital, Dispensary and Medical Officers' quarters.

VI. SCIENTIFIC.

Investigation of Tsetse-Flies by Dr. R. H. Miller, Medical Officer, on that part of the River Gambia between Kau-ur and Basse.

Most of the flies were caught in a steam launch, a few on the river bank.

Type.—All were *Glossina pulpalis*.

Distribution.—The flies appeared to be more numerous below MacCarthy Island.

Distance of Flight.—The flies rarely came on board if the launch was over 30 yards from the river bank; although mangrove flies would infest the boat at over a hundred yards distance from the shore.

Activity.—Was considerably lessened between midday and 2.30 p.m.

Haunts.—Preferred that part of the river where large shady trees were numerous and the mangrove not too dense.

No Pupæ were found.

One doubtful case of Sleeping Sickness was seen at Bassé. No cases detected at Georgetown.

Two dogs were found to be heavily infected with Trypanosomes; both recovered under treatment by Tartar Emetic and Liquor Arsenicalis.

VII. PRISONS.

I.—REPORT ON BATHURST PRISON FOR 1923.

Health of Prisoners.—Since the taking over of the Sanitary Station as a prison the health of the prisoners has markedly improved. Certainly for the present the dread Beriberi has practically disappeared, and there can be little doubt that this is due to the change of locality and diet. There is now a large garden at No. 2 Prison with no lack of fresh vegetables; also native rice has been substituted for polished rice.

It is hoped that early in January, 1924, all prisoners will be transferred to the new prison, as the work in connection with it is nearing completion.

Sanitation.—The general sanitary arrangements are good, and an ample supply of water is available at both No. 1 and No. 2 Prisons from a pipe-borne supply.

At No. 2 Prison general sanitary improvements are being carried out daily.

Diet.—The quality of the prison diet is good, and native rice has now been substituted for polished rice.

Prevalent Diseases.—Prevalent diseases during the year were Beriberi and diarrhoea.

STATISTICS:—

No. of Prisoners, 290.

„ „ „ admitted in Gaol Infirmary, 49, of which 34 were cases of Beriberi.

„ „ „ admitted to Colonial Hospital, 2.

No. of Deaths, Beriberi, 8.

„ „ „ Broncho-Pneumonia, 1.

„ „ „ Exhaustion from Diarrhoea, 1.

Prisoners on hard labour carry out the work usually performed by an ordinary labourer. Others are put to gardening, cooking, tailoring, Infirmary attendant or office work, according to their capabilities.

The health of the Prison Staff is very satisfactory, and shortly all the Staff will be housed in a separate Compound adjacent to the prison.

(Signed) DR. R. H. MILLER,
Medical Officer.

II.—For GEORGETOWN PRISON, see SEPARATE REPORT ON GEORGETOWN.

The Senior Medical Officer.

SIR,

I have the honour to submit to you the Annual Medical Report on the Protectorate and Georgetown for 1923.

I have the honour to be,

Sir,

Your obedient Servant,

(Signed) JOHN C. CRUICKSHANK,

Medical Officer.

19/2/24.

GEORGETOWN.

ANNUAL MEDICAL REPORT FOR THE PROTECTORATE AND GEORGETOWN, 1923.

The Protectorate Medical Headquarters consist of the Hospital and Dispensary at Georgetown, MacCarthy Island.

1. *Staff*.—A Medical Officer has been stationed at Georgetown for five months of the present year.

The rest of the staff consists of :—

- (1) The dispenser.
- (2) The cook, who is also attendant and dresser.
- (3) The market caretaker acts as hospital labourer.

Financial.—The revenue derived from the small charges made for treatment and drugs to such patients as are able to pay was £10 4s. 9d.

2. *Health*.—The data from which the following statements are made refer only to Georgetown and only roughly indicate the state of health of the Protectorate in general. Certain other riverine towns are now attaining greater medical importance than Georgetown.

(a) GENERAL.—The health of the general population during the year has been good and no outbreaks of epidemic disease have occurred.

(b) EUROPEANS.—No serious cases of illness amongst Europeans fall to be recorded this year. Medical attention has chiefly been required for malaria of a mild type, influenza and sunstroke. The European seamen on the groundnut steamers are rarely, if ever, provided with sun helmets, and apparently no effort is made to compel them to wear them : ill health and loss of time are the invariable result.

(c) NATIVES.—(i.) Officials.—There are usually about 20 native officials, including police, stationed in Georgetown, and the attention to these has mainly been for minor ailments of the same nature as those noted below. No deaths took place.

(ii.) General Population.—The conditions for which treatment was applied mainly were the following :—

(1) Digestive Disorders.—Parasites, *tænia* and *ascaris* are responsible for a proportion of these.

(2) Respiratory Disease.—Bronchitis is commonest in October, and a sudden cold spell gives rise to cases of pneumonia and, in children, broncho-pneumonia. Tuberculosis is not infrequent.

(3) Skin Diseases.—The most frequent is scabies, but impetigo and a form of ringworm of the body are often seen.

(4) Wounds and other injuries form a large proportion of the cases treated.

(5) Malaria of a mild form and Pyrexias of obscure origin. The number of these cases tends to increase towards the end of the rainy season.

(6) Tropical Ulcer of the Legs is extremely common. It is rarely seen in an early stage, and non-absorptive native dressings, such as leaves, cause

the pus to be retained and the resulting chronic ulcer with indurated edges is slow to heal.

(7) Muscular Rheumatism.

(8) Venereal Disease is widespread. Possibly a number of these cases of chronic osteitis and ulcer are syphilitic and some of the rheumatic cases gonorrhoeal.

(9) Conjunctivitis and Blepharitis are common, and in many cases irritation from groundnut dust must be responsible.

(10) Goitre.—This is frequently seen in Georgetown and the Protectorate. It is simple, occurs in young people, commonest in females, and often attains a large size. It appears to be more frequent where drinking-water is taken from wells.

(11) Cases of Trypanosomiasis and Leprosy are occasionally seen.

(12) There was one case only of Smallpox in Georgetown, but many cases in the Protectorate in the beginning of the year.

The treatment of injuries and of acute illnesses is very satisfactory, but the more chronic ailments are more difficult to treat with success. Patients suffering from chronic ulcers, venereal disease and goitre, for instance, will not or cannot attend for the necessarily prolonged courses of treatment or dressings at Georgetown, and it is not possible to give sufficient medicine or dressings in the Protectorate to effect the cure of such conditions. And, in the event of such patients being given materials and told how to change dressings daily, one may find in nearly every case that the original dressing is still unchanged several days later.

The problems to be met, thus, are the lack of education amongst the natives and the transport difficulty, which prevents frequent and regular visiting of each place by the Medical Officer.

The allocation of a motor-boat should increase the usefulness of the Medical Officer in emergency work amongst the Europeans, and, if an interpreter, who might also be trained as a dispenser, were provided to travel with him, amongst the native population also.

Vital Statistics.—The registration of births and deaths is carried out in Georgetown only. It is compulsory and reliable, being done through the headman to the dispenser, who acts as registrar.

GEORGETOWN.

	1921.	1922.	1923.
Births	39	33	28
Deaths	38	53	53

	Males.	Females.
Births	11	17

Georgetown Hospital.—The return of diseases of in-patients and out-patients treated in the hospital in 1923 is attached. Since the hospital was without a medical officer for a large part of the year, accurate diagnosis under each head has not been attempted.

IN-PATIENTS.										OUT-PATIENTS.											
	Remained.		Admitted.		Total.		Cured.		Relieved.		Not Relieved.		Died.		Remaining.		New Cases.		Old Cases.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Malaria ...	1	—	3	—	4	—	2	—	1	—	—	—	—	—	1	—	77	18	20	1	
Smallpox ...	—	—	1	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	
Dysentery ...	—	—	2	—	2	—	1	—	—	—	—	—	1	—	—	—	11	—	13	—	
Sleeping Sickness ...	—	1	—	1	—	2	—	—	1	—	—	—	—	—	1	—	—	—	—	—	
Gonorrhœa ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36	—	17	—	
Parasitic Disease ...	2	—	3	—	5	—	1	—	1	—	—	—	1	—	2	—	45	18	15	5	
Rheumatism ...	1	—	2	—	3	—	1	—	1	—	—	—	—	—	1	—	57	32	28	8	
Anæmia ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	
Debility ...	1	—	3	—	4	—	1	—	2	—	—	—	—	—	1	—	9	1	2	1	
Carbuncle ...	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	
Beriberi ..	5	—	3	—	8	—	2	—	—	—	—	—	1	—	5	—	6	—	2	—	
Goitre ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	35	8	15	
Disease of Nervous System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	39	11	8	—	
” Ear ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17	8	17	5	
” Eye ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20	7	7	3	
” Circulatory System	1	—	1	—	2	—	1	—	—	—	—	—	—	—	1	—	10	4	8	—	
” Respiratory System	1	—	5	—	6	—	2	—	—	—	1	—	2	—	1	—	159	63	25	13	
” Digestive System	1	—	3	—	4	—	2	—	—	—	—	—	1	—	1	—	345	168	34	13	
” Generative System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17	2	10	—	
” Associated with Pregnancy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	6	3	3	
” ” Parturition	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—
” of Breast ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	—	—	1
” Organs of Locomotion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	1
” Connective Tissue	—	—	3	—	3	—	1	—	2	—	—	—	—	—	—	—	15	2	10	2	
Cellular ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	5	4	2	
Skin ...	4	—	5	2	9	2	1	—	3	2	—	—	—	—	5	—	132	62	54	8	
Injuries ...	2	—	3	—	5	—	—	—	1	—	—	—	—	—	4	—	150	42	35	9	
Influenza ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	3	3	2	
Total	19	1	38	3	57	4	16	—	13	3	1	—	6	—	22	1	1,182	487	324	92	

SUMMARY.			
Officials ...	...	17	
Non-officials	...	2,087	6 died (In-Patients).
Police ...	...	53	
Total treated	...	<u>2,157</u>	

ANNUAL MEDICAL REPORT ON GEORGETOWN GAOL, 1923.

Sick parade for prisoners takes place at 8 a.m. daily at the Hospital, and there is also one cell in the prison reserved as an Infirmary with accommodation for four more serious cases.

The general health of the prisoners in 1923 has been good.

Prevalent Diseases.—I. Digestive—diarrhoea, constipation and tape-worms.

II. Slight attacks of malaria.

III. Muscular rheumatism.

Causes of Death.—There were four deaths of prisoners in 1923 :—

1. Dysentery.
2. Pneumonia and malaria.
3. “Tapeworm and ascaris” (no M.O. present).
4. Acute hæmorrhagic pancreatitis—this diagnosis was confirmed by post-mortem examination by Dr. Miller.

VIII. RECOMMENDATION FOR 1923 IN THE 1922 REPORT— ACTION TAKEN.

(a) SANITARY.

1. A Committee has been appointed to consider the question of towing barges out into the river where the pails could be emptied and cleared.
2. A Drainage scheme is being dealt with.
3. A new Sanitary Station has not yet been built, owing to the difficulty of finding a convenient site.
4. A Mother and Child Welfare Committee has been formed. The new maternity ward has been completed. Two additional African nurses have been appointed for training as midwives. Weekly Clinics have been started at the Hospital. Other schemes have been put forward for consideration.
5. The question of filtration of the water at Lamin has been held over for the present.
6. Slaughter House. Same as 5.
7. Extension of Market. Same as 5.
8. Two Public Pan Latrines completed.

(b) MEDICAL.

1. Maternity ward completed.
2. Electric light held over until the new scheme for the complete installation of electric lighting for Bathurst is adopted.
3. New Telephone system being installed.
4. A Medical Officer was stationed in the Protectorate during May to July and October to December. The staff at Bathurst should consist of at least one Senior Medical Officer, two Medical Officers and one Medical Officer of Health. In the Protectorate, one Medical Officer during the Trade Season.
5. X Ray apparatus completely installed and in working order.

IX. RECOMMENDATIONS FOR 1924.

(a) SANITARY.

1. A scheme for the suitable disposal of Night Soil for Bathurst.
2. A scheme for the filling-in of low-lying land and pipe drainage of Bathurst.
3. A Sanitary Station.
4. Installation of a mechanical filter at Lamin.
5. Extension of Market.
6. New Slaughter House.
7. Extension of Sanitation to riverine trading centres in the Protectorate.
8. Public Pan Latrine in Wellington Street.

(b) MEDICAL.

1. The installation of an electric bell system in the Victoria Hospital.
2. The conversion of the Old Military Hospital into a European Hospital.
3. Provision of a garage at Victoria Hospital.
4. Improvements to European Nursing Sister's Bungalow and to the Buckle Street Bungalow.

X. PUBLIC WORKS DURING 1923.

BATHURST.

1. Victoria Hospital Maternity Ward completed.
2. No. 2 Gaol extensions being carried out.
3. Two Public Pan Latrines.
4. Cattle Compound completed.

XI. PUBLIC WORKS ESTIMATES, 1923.

XX. PUBLIC WORKS RECURRENT.

						Estimate.	Actual Expenditure.
						£	£ s. d.
6.	Upkeep of Latrines	...	...	...	...	60	20 14 4
11.	„ „ Pumps and Wells	...	...	...	...	120	3 17 3
18.	„ „ Cemeteries	...	...	...	...	100	54 4 0

XXI. EXTRAORDINARY EXPENDITURE.

						Estimate.	Actual Expenditure.
						£	£ s. d.
3.	Victoria Hospital	...	...	...	...	1,000	708 15 7
6.	No. 2 Gaol Extension	...	...	...	...	1,000	835 10 7
7.	Improvement of Latrines	...	...	...	...	1,000	766 4 3
12.	Cattle Compound	...	...	...	...	450	66 2 3

TABLE I.

RETURN OF STATISTICS OF POPULATION FOR THE YEAR 1923.

	Europeans and Whites.	Africans and mixed colours.	East Indians.	Chinese and Malays.	Mixed and Coloured.	Totals.
Number of Inhabitants in 1922 ...	155	9,240	} re cord ed.	Not		9,395
„ „ Births during the year 1923	—	255				—
„ „ Deaths „ „ „	3	461				—
„ „ Immigrants „ „ „	}	Not rec orded.				—
„ „ Emigrants „ „ „						—
Number of Inhabitants in 1923 ...	}	See T otals			}	9,567 (Estimated)
Increase						172 (Estimated)
Decrease						—

TABLE II.

SUMMARY OF ROUTINE SANITARY WORK DONE DURING THE YEAR
IN THE TOWN.

1. NAME OF TOWN.—BATHURST.

	Approximate Area.	Number of proclaimed Open Spaces.
1921	} 400 acres (approximately)	} None.
1922		
1923		

2. POPULATION.

	Number of Natives.		Number of Europeans.		Total.
	Males.	Females.	Males.	Females.	
1921	8,962		265		9,227 (Census)
1922	—		—		9,395 (Estimated)
1923	—		—		9,567 (Estimated)

3. HOUSING.

	Number occupied by Europeans.	Number occupied by Natives.
Number of Houses—		
1921	44	2,181
1922	69	3,950
1923	73	3,986
Number of Huts—		
1921	} 3,494 (included as houses)	—
1922		—
1923		—

4. MOSQUITO PROTECTION OF HOUSES.

	1921.	1922.	1923.
Number of European houses wholly mosquito-protected ...	Nil	1	1
Number of European houses with mosquito room ...	Off. 42	43	43
Number rendered during the year wholly mosquito-protected	—	—	—
Number rendered during the year partially mosquito-protected	—	—	—

5. ERECTION OF NEW BUILDINGS DURING THE YEAR.

	1921.	1922.	1923.
Number of public buildings erected with sanction as to site, construction, and relation to other buildings ...	—	1	6
Number of houses erected with sanction as to site, construction, and relation to other buildings ...	—	4	21
Number of huts erected with sanction as to site, construction, and relation to other buildings ...	—	24	—
Number of houses built without sanction ...	—	—	—
Number of huts built without sanction ...	—	—	—

ACTION TAKEN.

			Number of Prosecutions.		Number demolished.	
			Huts.	Houses.	Huts.	Houses.
1921	...	...	—	—	—	—
1922	...	...	—	—	—	—
1923	...	...	—	—	—	5

6. MARKETS.

						Total number.	Number paved and drained.	Number unpaved.
1921	...	...	...	...	...	1	1	—
1922	...	...	...	...	...	1	1	—
1923	...	...	...	...	...	1	1	—

7. SLAUGHTER-HOUSES.

						Total number.	Number paved and drained.	Number unpaved.
1921	...	...	...	...	...	1	1	—
1922	...	...	...	...	...	1	1	—
1923	...	...	...	...	...	1	1	—

8. LATRINES.

	For Males.		For Females.					
	Number.	Number of seats.	Number.	Number of seats.				
Number of Public Latrines :—								
1921	...	...	...	...	16	70	8	52
1922	...	...	...	...	16	71	8	53
1923	...	...	...	...	11	64	10	61
Number of new Public Latrines erected during the year :—								
1921	...	...	...	...	}	Nil	—	—
1922	...	...	...	...				
1923	...	...	...	...				
Number of Public Latrines repaired during the year :—								
1921	...	...	...	...	5	—	—	—
1922	...	...	...	...	3	—	—	—
1923	...	...	...	...	7	—	—	—
Number of Public Latrines demolished during the year :—								
1921	...	...	...	...	}	Nil	—	—
1922	...	...	...	...				
1923	...	...	...	...				

	1921.	1922.	1923.
Number of Private Latrines (including official for 1923) ...	133	190	323
Average number of pails of nightsoil removed daily ...	256	321	325
Average number of soiled pails removed and clean pails substituted... ..	256	321	325
Number of nightsoil men employed to clean latrines and remove excreta	21	22	26
Number of cesspools	33	45	37
Number of cesspools cleansed	—	As required	—
Number of new cesspools constructed during the year ...	—	—	—
Number of old cesspools abolished	—	20	8
Number of cesspools oiled regularly by Department... ..	20	18	{ (included in 968 of 16)

9. REMOVAL OF REFUSE.

	1921.	1922.	1923.
Number of dustbins issued	33	97	64
Number of carts at work daily to remove refuse from streets ...	11	12	10
Amount of refuse removed daily	160 ?	95	49
Number of carts at work daily to remove refuse from yards and premises	As above		
Amount of refuse removed daily from yards and premises ...	As above		
Number of men employed for moving refuse	35	38	32

10. MODE OF DISPOSAL OF EXCRETA, REFUSE AND OFFAL.

	Daily average number of pails of excreta.			Daily average number of cartloads of refuse.			Daily average number of cartloads of Slaughter House and Market Offal.		
	1921.	1922.	1923.	1921.	1922.	1923.	1921.	1922.	1923.
Buried or trenched	—	—	—	—	—	—	} All thrown into the sea.		
Burnt	—	—	—	160	95	319			
Thrown into sea	256	273	325	—	—	—			
*Otherwise dealt with	—	—	—	—	—	—			

* State mode of disposal.

11. AVERAGE DAILY NUMBER OF CARTLOADS OF TIN CANS, BOTTLES, BROKEN CROCKERY, AND OTHER INCOMBUSTIBLE MATERIAL REMOVED FROM HOUSES, HUTS AND COMPOUNDS.

1921.	1922.	1923.
	Included under 10.	

12. WATER SUPPLY.

Nature of Water Supply.	1921.	1922.	1923.
Pipe-borne water :—			
Source (river, lake, or spring) :—			
Number of linear yards	—	—	—
Number of stand-pipes along roads	35	37	58
Number of stand-pipes in compounds and houses ...	—	—	—
Wells :—			
Public :—			
Number	43	43	43
Number with pumps protected against surface water and mosquito-protected	All sealed and unused.		
Private :—			
Number	?	?	204
Number protected against surface water and mosquito-protected	All stocked with fish.		
Tanks :—			
Public :—			
Number underground	} None.	None.	None.
Number mosquito-protected and served by pumps ...			
Number above ground			
Number mosquito-protected			
Number of 400 gallons capacity or less			
Number above 400 gallons			

Nature of Water Supply.	1921.	1922.	1923.
Tanks :—			
Private :—			
Number underground	} 3	3	3
Number mosquito-protected			
Number above ground			
Number mosquito-protected			
Number of 400 gallons capacity or less			
Number above 400 gallons	4	4	4
Nature of tanks :—			
Iron	2	2	2
Barrels :—			
Number	}	No record.	
Number mosquito-protected			

13. DRAINAGE.

Nature of Drainage.	Public.	Private.
Masonry drains :—		
Lineal yards of Masonry drains :—		
1921	1,000	—
1922	1,000	—
1923	1,000 (approx.)	—
Lineal yards reconstructed during the year :—		
1921	} Nil	—
1922		
1923		
Lineal yards repaired during the year :—		
1921	} Nil	—
1922		
1923		
Lineal yards of new drains constructed during the year :—		
1921	} Nil	—
1922		
1923		
Earth drains or ditches :—		
Number of linear yards of ditches cleaned :—		
1921	800	—
1922	800	—
1923	750 (approx.)	—
Number of linear yards of ditches dug and graded :—		
1921	—	—
1922	550 (approx.)	—
1923	—	—
Average frequency of clearing ditches of grass :—		
1921	} Once in 2 weeks	} —
1922		
1923		
	during rains.	

14. CLEARANCE OF UNDERGROWTH, LONG GRASS AND JUNGLE.

	1921.	1922.	1923.
Number of square yards of weeds, grass, and vegetation cut and removed	2,000	2,500	2,500 (approx.)
Average frequency of clearance of rank vegetation on same area	Once a month during rains.		

15. EXCAVATIONS AND LOW-LYING LAND.

	1921.	1922.	1923.
Number of pools and excavations	} —	6	Numerous
Number of excavations filled up			
Amount of low-lying and marsh land raised and drained ...			
Number of pools, marshes, streams, &c., fish-stocked... ..	—	—	Numerous
Number of cubic yards of material used for filling up pools and excavations	1,487	1,000	800 (approx)
Number of persons fined for making new excavations ...	—	—	—
Average number of men daily employed in filling up pools, &c.	No special men.		

16. OILING.

	1921.	1922.	1923.
Number of drains oiled	500	947	968
Number of pools and excavations oiled			
Number of tanks and barrels oiled			
Average number of men daily employed for oiling drains, pools and water tanks or barrels	80 ?	?	14

17. INSPECTIONS AND PROSECUTIONS.

	1921.	1922.	1923.
Number of inspectors employed	6	7	7
Number of houses inspected, <i>i.e.</i> , visits made	45,290	53,408	51,771
Number of houses where larvæ were found	169	210	165
Number of notices served to remove conditions causing the breeding of larvæ	203	218	188
Number of persons fined for having mosquito larvæ on premises	169	210	155
Number of notices served to remove insanitary conditions on premises	470	442	593
Number of persons fined for not removing insanitary con- ditions after notice	—	1	—
Number of soda and aerated water factories inspected ...	1	1	—

Excluding pools, boats, &c.

TABLE III.

BATHURST STATION.
METEOROLOGICAL RETURN FOR THE YEAR 1923.

	Temperatures.				Rainfall.	Winds.
	Shade Max.	Shade Min.	Range.	Mean.	Amount in Inches.	General Direction.
January ...	90	55	35	72·5	—	North-East
February ...	98	60	38	79·0	—	North-West
March ...	100	58	42	79·0	—	Variable
April ...	100	62	38	81·0	—	Do.
May ...	93	65	28	79·0	—	Do.
June ..	90	69	21	79·5	3·77	Do.
July ...	89	70	19	79·5	27·49	Do.
August ...	88	70	18	79·0	24·10	North-West
September ...	90	71	19	80·5	6·61	Do.
October ...	90	70	20	80·0	3·41	Variable
November	89	68	21	78·5	—	North-East
December ...	90	65	25	77·5	0·15	Do.
Total ...	1,107	783	324	945·0	65·53	
Average ...	92·2	65·2	27·0	78·7	—	

TABLE IV.

GEORGETOWN STATION.
METEOROLOGICAL RETURN FOR THE YEAR 1923.

	Temperatures.				Rainfall.	Winds.
	Shade Max.	Shade Min.	Range.	Mean.	Amount in Inches.	General Direction.
January ...	96	56	40	76·0	—	Variable
February ...	102	54	48	78·0	—	Do.
March ...	108	63	45	85·5	—	Do.
April ...	110	61	49	85·5	—	Do.
May ...	110	73	37	91·5	—	Do.
June ...	107	73	34	90·0	3·48	Do.
July ...	100	70	30	85·0	4·43	Do.
August ...	94	71	23	82·5	9·08	Do.
September ...	97	70	27	83·5	14·85	Do.
October ...	99	71	28	85·0	2·37	North
November ...	98	65	33	81·5	1·75	Do.
December ...	97	60	37	78·5	0·11	Do.
Total ...	1,218	787	431	1,002·5	36·07	
Average ...	101·5	65·5	35·9	83·5	—	

TABLE V.

VICTORIA HOSPITAL.

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923.

Diseases.	*Remaining in Hospital at end of 1922.	Yearly Total.		†Total Cases Treated.	‡Remain- ing in Hospital at end of 1923.	Remarks.
		Admissions.	Deaths.			
INFECTIVE DISEASES.						
Beri-Beri	...	3	...	3	...	
Cerebro-Spinal Fever	...	...	...	...	...	
Chicken-Pox	...	...	...	...	...	
Cholera	...	...	...	...	...	
Dengue	...	...	...	...	...	
Diphtheria... ..	...	...	...	...	...	
Dysentery—Amœbic	1	19	3	20	...	
Endocarditis—infective	...	...	...	...	...	
Enteric	...	...	...	...	...	
Erysipelas	...	...	...	...	...	
Gonorrhœa	...	4	...	4	...	
Influenza	...	32	2	32	1	
Kala Azar... ..	...	...	...	...	...	
Leprosy—						
(a) Nodular	...	...	...	...	...	
(b) Anæsthetic	...	...	...	...	...	
Malaria—						
(a) Tertian	1	...	...	1	...	
(b) Quartan	...	...	...	...	...	
(c) Aestivo-autumnal	...	104	3	104	...	
(d) Chronic Malaria	...	...	...	...	...	
(e) Black-water... ..	...	6	4	6	...	
Measles	...	...	...	...	...	
Malta Fever	...	...	...	...	...	
Plague	...	...	...	...	...	
Pneumonia—Lobar	2	37	18	39	...	
Rabies	...	...	...	...	...	
Relapsing Fever	...	...	...	...	...	
Rheumatic Fever	1	...	...	1	...	
Septicæmia	...	2	2	2	...	
Trypanosomiasis (Sleeping Sickness)	...	...	...	...	...	
Small-Pox	...	...	...	...	...	
Syphilis—						
(a) Primary	...	1	...	1	...	
(b) Secondary	...	...	...	...	...	
(c) Tertiary	...	1	1	1	...	
Tetanus	...	6	5	6	...	
Tuberculosis	2	9	3	11	2	
Whooping Cough	...	...	...	...	...	
Yaws	...	...	...	...	...	
Yellow Fever	...	...	...	...	...	
INTOXICATIONS.						
Alcoholism—Delerum Tremens	...	1	...	1	...	
Morphinism	...	...	...	...	...	
Others	...	...	...	...	...	
Carried forward	7	225	41	232	3	

* i.e., the year previous to that for which the Return is made.

† "Total cases treated" will, of course, include those remaining in Hospital at the end of the previous year.

‡ The figures in this column to be carried on to the next year's Return.

TABLE V.—*continued.*VICTORIA HOSPITAL—*continued.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923—*continued.*

Diseases.	Remaining in Hospital at end of 1922.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1923.	Remarks.
		Admissions.	Deaths.			
Brought forward ...	7	225	41	232	3	
GENERAL DISEASES.						
Debility	...	8	1	8	...	
Anæmia	...	...	...	...	...	
Anæmia—Pernicious	...	...	...	...	...	
Diabetes	...	...	...	...	...	
Exophthalmic Goitre	...	...	...	...	...	
Gout	...	...	...	...	...	
Leucocythæmia	...	...	...	...	...	
Hodgkin's Disease	...	...	...	...	...	
Myxœdema	...	...	...	...	...	
Purpura	...	...	...	...	...	
Rickets	...	...	...	...	...	
Scurvy	...	1	1	1	...	
Rheumatism	...	15	...	15	...	
LOCAL DISEASES.						
<i>Diseases of the Nervous System.</i>						
Sub-section 1.						
Neuritis	...	1	...	1	...	
Meningitis... ..	...	6	5	6	...	
Myelitis	...	1	...	1	...	
Hydrocephalus	...	...	...	...	...	
Encephalitis	...	...	...	...	...	
Abscess of Brain	...	...	...	...	...	
Congestion of Brain	...	...	...	...	...	
Cerebral Hæmorrhage	...	1	1	1	...	
Sub-section 2.						
Apoplexy	...	...	...	...	...	
Paralysis	...	2	...	2	...	
Chorea	...	...	...	...	...	
Epilepsy	...	1	...	1	...	
Neuralgia	...	4	...	4	...	
Hysteria	...	...	...	...	...	
<i>Mental Diseases.</i>						
Sub-section 3.						
Idiocy	...	2	...	2	...	
Mania	...	1	...	1	...	
Melancholia	...	...	...	...	...	
Dementia	...	3	1	3	...	
Delusional Insanity	...	...	...	...	...	
<i>Diseases of the Eye.</i>						
Conjunctivitis	...	4	...	4	...	
Keratitis	...	...	...	...	...	
Ulceration of Cornea	...	...	...	...	...	
Iritis	1	...	...	1	...	
Optic Neuritis	...	...	...	...	...	
Cataract	...	...	...	...	...	
Gonorrhœal ophthalmia	...	1	...	1	...	
Carried forward ...	8	276	50	284	3	

TABLE V.—*continued.*VICTORIA HOSPITAL—*continued.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923—*continued.*

Diseases.	Remaining in Hospital at end of 1922.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1923.	Remarks.
		Admissions.	Deaths.			
Brought forward ...	8	276	50	284	3	
LOCAL DISEASES— <i>contd.</i>						
<i>Diseases of the Ear.</i>						
Inflammation	...	...	...	...	...	
Other Diseases	...	...	...	...	...	
<i>Diseases of the Nose</i>	...	...	...	...	...	
<i>Diseases of the Circulatory System.</i>						
Pericarditis	...	...	...	...	...	
Endocarditis	...	...	...	...	...	
Valvular Mitral	...	6	...	6	...	
Aortic	...	...	...	...	...	
Tricuspid	...	...	...	...	...	
Pulmonary	...	...	...	...	...	
Arterial Sclerosis	...	1	...	1	...	
Aneurism	...	...	...	...	...	
Disordered action of the Heart ...	...	33	5	33	...	
Cardiac Hypertrophy	1	...	...	1	...	
<i>Diseases of the Respiratory System.</i>						
Laryngitis	...	...	...	...	...	
Bronchitis	...	19	...	19	...	
Broncho-pneumonia	...	1	...	1	...	
Abscess of Lung	1	...	...	1	...	
Gangrene of Lung	...	...	...	...	...	
Emphysema	...	...	...	...	...	
Pleurisy	...	5	...	5	...	
Empyema	...	...	...	...	...	
Asthma	...	1	...	1	...	
<i>Diseases of the Digestive System.</i>						
Pyorrhœa	...	1	...	1	...	
Stomatitis	...	...	...	...	...	
Caries of teeth	...	2	...	2	...	
Glossitis	...	...	...	...	...	
Sore Throat	...	2	...	2	...	
Inflammation of Tonsils	...	1	...	1	...	
Gastritis	...	1	...	1	...	
Ulceration of Stomach	...	...	...	...	...	
Hæmatemesis	...	...	...	...	...	
Dilatation of Stomach	...	...	...	...	...	
Stricture of Stomach	...	...	...	...	...	
Dyspepsia	...	7	...	7	...	
Enteritis	...	...	...	...	...	
Appendicitis	...	4	...	4	...	
Colitis	...	...	...	...	...	
Ulceration of Intestines	...	...	...	...	...	
Sprue	...	...	...	...	...	
Carried forward ...	10	360	55	370	3	

TABLE V.—*continued.*VICTORIA HOSPITAL—*continued.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923—*continued.*

Diseases.	Remaining in Hospital at end of 1922.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1923.	Remarks.
		Admissions.	Deaths.			
Brought forward ...	10	360	55	370	3	
LOCAL DISEASES— <i>contd.</i>						
<i>Diseases of the Digestive System.</i>						
Hernia—Inguinal ...	...	14	...	14	...	
Diarrhœa ...	...	5	...	5	...	
Constipation ...	...	1	...	1	...	
Colic ...	...	5	...	5	...	
Hæmorrhoids ...	...	6	...	6	1	
Pancreatitis ...	...	...	...	...	...	
Hepatitis—Acute... ..	...	1	...	1	...	
Abscess ...	...	...	...	...	...	
Cirrhosis ...	...	1	...	1	...	
Jaundice ...	...	1	...	1	...	
Peritonitis... ..	...	1	...	1	...	
Ascites ...	...	1	1	1	...	
Fissure in ano ...	...	1	...	1	...	
<i>Diseases of the Lymphatic System.</i>						
Splenitis ...	...	...	...	...	...	
Inflammation of Lymphatic Gland	...	3	...	3	...	
Suppuration of Lymphatic Gland	...	...	...	...	...	
Lymphangitis ...	...	...	...	...	...	
Elephantiasis ...	...	1	...	1	...	
<i>Diseases of the Urinary System.</i>						
Acute Nephritis ...	...	4	...	4	...	
Bright's Disease ...	1	15	4	16	...	
Pyelitis ...	...	...	...	...	...	
Calculus ...	...	...	...	...	...	
Renal Colic ...	...	...	...	...	...	
Cystitis ...	...	1	...	1	...	
Vesical Calculus ...	...	...	...	...	...	
Suppression ...	...	2	...	2	...	
Hæmaturia ...	...	...	...	...	...	
Chyluria ...	...	...	...	...	...	
<i>Diseases of the Generative System.</i>						
Male Organs—						
Urethritis ...	...	...	...	...	...	
Gleet ...	...	...	...	...	...	
Stricture ...	...	...	...	...	...	
Prostatitis ...	...	...	...	...	...	
Soft chancre ...	...	...	...	...	...	
Condyloma ...	...	...	...	...	...	
Inflammation of Scrotum	...	...	...	...	...	
Hydrocele ...	...	1	...	1	...	
Orchitis ...	...	2	...	2	...	
Epididymitis ...	...	...	...	...	...	
Abscess of Testicle ...	...	...	...	...	...	
Phimosis ...	...	6	...	6	...	
Bubo ...	...	1	...	1	...	
Carried forward ...	11	433	60	444	4	

TABLE V.—*continued.*

VICTORIA HOSPITAL—*continued.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923—*continued.*

Diseases.	Remaining in Hospital at end of 1922.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1923.	Remarks.
		Admissions.	Deaths.			
Brought forward ...	11	433	60	444	4	
LOCAL DISEASES— <i>contd.</i>						
<i>Diseases of the Generative System.</i>						
Female Organs—						
Ovaritis	...	...	...	...	...	
Ovarian Cyst	...	...	...	...	...	
Endometritis	...	2	...	2	...	
Displacement of Uterus	...	...	...	...	...	
Vaginitis	...	...	...	...	...	
Amenorrhœa	...	...	...	...	...	
Dysmenorrhœa	...	...	...	...	...	
Menorrhagia	...	...	...	...	...	
Leucorrhœa	1	...	...	1	...	
Abortion	...	1	...	1	...	
Delayed Labour	...	...	...	...	...	
Postpartem Hæmorrhage	...	1	1	1	...	
Retained Placenta	...	...	...	...	...	
Premature Birth	...	...	...	...	...	
Puerperal Septicæmia	...	1	1	1	...	
Mastitis	...	1	...	1	...	
Abscess of Breast	...	...	...	...	...	
Normal Labour	...	20	...	20	...	
<i>Diseases of Organs of Locomotion.</i>						
Osteitis	...	1	1	1	...	
Arthritis	1	3	...	4	...	
Spondylitis	...	...	...	...	...	
Bursitis	...	...	...	...	...	
Periostitis	...	1	...	1	...	
<i>Diseases of Connective Tissue.</i>						
Cellulitis	...	3	...	3	...	
Abscess	...	26	2	26	...	
Elephantiasis	...	...	...	...	...	
Ulcer	4	17	1	21	1	
<i>Diseases of the Skin.</i>						
Urticaria	...	...	...	...	...	
Eczema	...	...	...	...	...	
Boil	...	5	...	5	...	
Carbuncle	...	...	...	...	...	
Herpes	...	...	...	...	...	
Psoriasis	...	...	...	...	...	
Oriental Sore	...	...	...	...	...	
Tinea	...	...	...	...	...	
Scabies	...	...	...	...	...	
Acne	...	...	...	...	...	
Prickly Heat	...	...	...	...	...	
Keleid	...	1	...	1	...	
Dermatitis	...	1	...	1	...	
Carried forward ...	17	517	66	534	5	

TABLE V.—*continued.*VICTORIA HOSPITAL—*continued.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923—*continued.*

Diseases.					Remaining in Hospital at end of 1922.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1923.	Remarks.
						Admissions.	Deaths.			
Brought forward ...					17	517	66	534	5	
Injuries—										
General					...	...	...	...	...	
Burns					1	6	2	7	...	
Local					...	45	...	45	1	
Mauled by Leopard					1	...	...	1	...	
Surgical Operations					...	...	...	...	...	Not a disease already in- cluded under diseases see below.
Tumours					...	5	1	5	1	
Malformations					...	...	...	...	...	
Poisons—										
Phosphorus					...	1	1	1	...	
Parasites—										
Animal					...	...	...	...	...	
Protozoa					...	...	...	...	...	
Trematoda (Flukes)					...	...	...	...	...	
Cestoda—										
Tænia Solium					...	...	...	...	...	
Tænia Saginata					...	...	...	...	...	
Nematoda—										
Ascaris					...	...	...	...	...	
Tricocephalus Dispar.					...	...	...	...	...	
Trichina					..	...	...	...	...	
Dracunculus					...	1	...	1	...	
Filariasis					...	...	...	...	...	
Strongylus					...	...	...	...	...	
Ankylostomiasis					...	...	...	...	...	
Oxyuris					...	...	...	...	...	
Insecta—										
Myiasis					...	...	...	...	...	
Malingering					...	21	...	21	1	
Total					19	596	70	615	8	

TABLE VI.

VICTORIA HOSPITAL.

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1923.

Diseases.	Remaining in Hospital at end of 1922.	Yearly Total.		Total Cases Treated.	Remain- ing in Hospital at end of 1923.	Remarks.
		Admissions.	Deaths.			
SURGICAL OPERATIONS.						
Herniotomy	...	...	...	14	...	
Incision of Abscess	...	...	...	11	...	
Incision of Tumours	...	...	...	10	...	
Circumcision	...	...	...	6	...	
Suturing wounds	...	...	...	4	...	
Removal of foreign bodies	...	...	...	2	...	
Amputation	...	...	...	2	...	
Currettage... ..	...	...	...	2	...	
Total	...	...	...	51	...	

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TABLE VII.—*continued.*VICTORIA HOSPITAL—*continued.*RETURN OF DISEASES (OUT-PATIENTS) FOR THE YEAR 1923—*continued.*

Diseases.	Males.	Females.
Brought forward	2,290	1,126
<i>Diseases of the Respiratory System.</i>		
Laryngitis	25	12
Bronchitis	1,025	500
Broncho-pneumonia	1	1
Pleurisy	36	18
<i>Diseases of the Digestive System.</i>		
Gingivitis	1	...
Pyorrhœa	1	2
Parotitis	...	1
Stomatitis	50	23
Caries of Teeth	93	28
Glossitis	4	...
Sore Throat	9	5
Inflammation of Tonsils	8	1
Gastritis	9	2
Ulceration of Stomach	...	...
Hæmatemesis	1	...
Dyspepsia	113	104
Hernia	16	...
Diarrhœa	318	135
Constipation	619	264
Colic	39	24
Hæmorrhoids	12	3
Peritonitis	1	...
<i>Diseases of the Lymphatic System.</i>		
Inflammation of Lymphatic Gland	11	1
Suppuration of the Lymphatic Gland	13	4
Elephantiasis	6	...
<i>Diseases of the Urinary System.</i>		
Acute Nephritis	2	5
Bright's Disease	42	12
Cystitis	3	2
Suppression	...	1
Hæmaturia	...	1
Uræmia	...	1
<i>Diseases of the Generative System.</i>		
Male Organs—		
Soft Chancre	4	...
Hydrocele	6	...
Orchitis	6	...
Bubo	9	...
Phimosis	1	...
<i>Diseases of the Generative System.</i>		
Female Organs—		
Fibroid uteri	...	1
Pregnancy	...	9
Vaginitis	...	1
Amenorrhœa	...	6
Dysmenorrhœa	...	24
Menorrhagia	...	6
Leucorrhœa	...	...
Abortion	...	10
Carried forward	4,774	2,333

TABLE VII.—*continued.*

VICTORIA HOSPITAL—*continued.*

RETURN OF DISEASES (OUT-PATIENTS) FOR THE YEAR 1923—continued.

Diseases.								Males.	Females.
Brought forward								4,774	2,333
<i>Diseases of the Generative System—contd.</i>									
Postpartem Hæmorrhage	...	...	...	...	...	...	...	...	2
Mastitis	...	...	...	...	...	...	...	...	13
Subinvolution	...	...	...	...	...	...	...	...	1
<i>Diseases of Organs of Locomotion.</i>									
Osteitis	...	...	...	...	...	...	...	1	1
Arthritis	...	...	...	...	...	...	...	4	4
Spondylitis	...	...	...	...	...	...	...	...	...
Synovitis	...	...	...	...	...	...	...	11	1
<i>Diseases of Connective Tissue.</i>									
Cellulitis	...	...	...	...	...	...	...	3	2
Abscess	...	...	...	...	...	...	...	145	40
Ulcer	...	...	...	...	...	...	...	369	88
<i>Diseases of the Skin.</i>									
Pedeculi	...	...	...	...	...	...	...	...	2
Urticaria	...	...	...	...	...	...	...	2	1
Eczema	...	...	...	...	...	...	...	5	2
Boil ...	...	...	...	...	...	...	...	60	8
Tinea	...	...	...	...	...	...	...	4	3
Scabies	...	...	...	...	...	...	...	44	17
Herpes	...	...	...	...	...	...	...	1	1
Craw craw	...	...	...	...	...	...	...	28	8
Dermatitis	...	...	...	...	...	...	...	43	3
Impetigo	...	...	...	...	...	...	...	7	3
<i>Injuries.</i>									
General	...	...	...	...	...	...	...	1	...
Burns	...	...	...	...	...	...	...	15	10
Local	...	...	...	...	...	...	...	226	29
Tumours	...	...	...	...	...	...	...	20	5
Parasites—									
Cestoda—Tænia Saginata	...	...	...	...	...	...	...	61	40
Nematoda—									
Ascaris	...	...	...	...	...	...	...	182	73
Dracunculus	...	...	...	...	...	...	...	1	...
Ankylostomiasis	...	...	...	...	...	...	...	1	...
Oxyuris	...	...	...	...	...	...	...	5	9
Total								6,013	2,699

TABLE VIII.

FINANCIAL STATEMENT.—MEDICAL DEPARTMENT.

Details of Expenditure.	Estimated.	Actual.		
	£	£	s.	d.
PERSONAL EMOLUMENTS	8,800	7,723	13	4
OTHER CHARGES—				
Travelling Allowance to African Medical Officer in Protectorate	91	72	10	0
Horse, Motor and Bicycle Allowances	140	154	9	10
Fees for Course of Instructions to Medical Officer in England	50	—	—	—
Outfit Allowances to Nursing Sisters	30	27	10	0
Sea Passages	302	349	18	3
Fees in Connection with Appointments to European Staff	70	91	17	4
Uniforms for Attendants	85	74	19	3
Maintenance of Sick (Dietary, etc.)	1,455	854	12	3
Repairs to Hospital Appliances	50	43	16	1
„ „ „ Furniture	50	31	14	10
Bedding and Clothing	213	162	16	8
Medicines and Vaccines	1,000	826	13	11
Dressings	315	191	12	8
Medical Comforts	90	39	0	8
„ Instruments	170	203	13	1
Washing, Disinfectant and Soap	140	128	1	8
Fuel and Lighting	120	69	5	9
Infectious Diseases Prevention	100	62	18	0
„ „ Hospital	30	20	9	4
Fees to Vaccinators	100	270	13	0
Expenses of Burials	30	36	16	7
Maintenance of Lunatics at Sa. Leone	380	256	2	6
„ „ Home for Destitutes	230	207	7	4
Transport	130	16	11	5
Sundries	60	48	14	7
Extra Assistance in Emergency Cases	30	—	—	—
Laboratory Equipment	30	58	17	1
Medical Library	20	12	16	5
Equipment, Nurses' Quarters	15	9	19	3
Outfit Allowance for Officers	—	60	0	0
Purchase of Hospital Furniture	—	28	0	0
Total	£14,326	£12,135	11	1

TABLE IX.

FINANCIAL STATEMENT.—PUBLIC HEALTH DEPARTMENT.

Details of Expenditure.							Estimated.	Actual.		
							£	£	s.	d.
PERSONAL EMOLUMENTS	...	...	...	...	...	...	2,712	2,762	1	11
OTHER CHARGES—										
Horse, Motor and Bicycle Allowances	...	...	...	...	...	...	64	61	12	—
Sea Passages	...	...	...	...	...	...	151	145	11	6
Uniforms	...	...	...	...	...	...	45	30	1	11
Anti-Mosquito Measures	...	...	...	...	...	...	1,000	945	5	5
Upkeep, Horses and Carts	...	...	...	...	...	...	525	448	4	1
„ Street Lights	...	...	...	...	...	...	400	256	19	1
Cleaning of Streets and Drains	...	...	...	...	...	...	1,600	1,640	11	6
Sanitary Night Service	...	...	...	...	...	...	850	913	12	6
Cleaning Market and Slaughterhouses	...	...	...	...	...	...	127	134	0	3
„ of Cemeteries	...	...	...	...	...	...	115	111	0	6
„ on Government Compounds	...	...	...	...	...	...	250	250	0	0
Expenses of Working Sluice Gates...	...	...	...	...	...	...	100	100	0	0
Mangrove Cutting	...	...	...	...	...	...	50	49	10	0
Sundries	...	...	...	...	...	...	10	—	—	—
Latrine Pails and Dustbins...	...	...	...	...	...	...	135	169	12	0
Rat Traps and Poison, etc.	...	...	...	...	...	...	50	12	17	2
Clayton Disinfecting Machines	...	...	...	...	...	...	200	179	7	1
Tools	...	...	...	...	...	...	60	44	16	6
Total							£8,444	£8,255	3	5

